

Nuclear-Power Industry Enjoys Revival 30 Years After Accident

The Wall Street Journal
March 28, 2009

By TIMOTHY AEPPEL

Thirty years after the accident at Three Mile Island, the nuclear power industry is moving ahead with plans to build a string of new reactors in the U.S., though the revival faces many uncertainties.

The crisis that erupted in the predawn hours of March 28, 1979, when a combination of worker mistakes and equipment malfunctions triggered a partial meltdown in the core of one of two reactors at a power plant near Harrisburg, Pa., was long thought to have sealed the fate of the industry in the U.S.



But rising concerns about global warming have set the stage for a comeback. Nuclear power can generate electricity without producing the greenhouse gases associated with energy sources such as coal.

[View Full Image](#)



Associated Press

The partial meltdown at the Three Mile Island plant, shown this month, set back nuclear power in U.S. for decades.

The U.S. has 104 reactors from the earlier wave of construction, which generate about 20% of the nation's electricity. Utilities have applied to build 26 new

reactors, often at or adjacent to existing plants, and the Nuclear Regulatory Commission, which has to approve the plans, says the first approvals could come by 2011. Given how long it takes to build a plant, the first wouldn't come on line until later in the decade.

But the revival faces tough barriers, including high costs. Jone-Lin Wang, managing director of the global power group at Cambridge Energy Research Associates, a consulting firm, says estimates "have gone up substantially, compared to just a few years ago." A 1,000 megawatt unit could cost \$6 billion to \$8 billion, she says, adding that since many plans call for building twin units as part of a single project, that could push total price tags up to \$16 billion.

"For some of the companies going through the licensing process, that's the same size as their entire market cap," she says, and it remains unclear whether they can secure financing.

Despite these uncertainties, the industry is growing again, particularly in western Pennsylvania -- not far from Three Mile Island -- a region long associated with nuclear businesses. Larry Foulke, director of nuclear programs at the University of Pittsburgh, sees it in his classrooms: Pitt created an introductory nuclear engineering class in 2006 and expected 25 to enroll. Seventy-five signed up. For next fall's class, 104 have already pre-enrolled.

Pittsburgh-based Westinghouse, which builds and maintains reactors and is now part of Japan's Toshiba Corp., added 1,400 workers last year to handle the influx of business, and says it will keep adding 650 a year for the next half a decade.

"The recession is something everyone is paying attention to, but it doesn't seem to be having a significant impact on us," says company spokesman Vaughn Gilbert, noting that the company inked another deal in January. Westinghouse now has contracts to build six reactors in the U.S.

It's hard to overstate the impact Three Mile Island had on the nuclear industry. Just days before the accident, the movie "The China Syndrome" opened in U.S. theaters, depicting a catastrophe at a nuclear plant. After the accident, no new applications to build nuclear plants were filed with the NRC until the recent wave began in 2007. The second reactor at the site, which was undamaged, was eventually restarted in October 1985, while the damaged reactor has remained closed.

The accident spurred sweeping changes as companies poured money into safer designs and better safety systems. The cleanup helped spark advances in robotics technology. Carnegie Mellon University in Pittsburgh built a series of robots to aid in the process. "There were a great deal of operational firsts that occurred with those robots, which opened the way for other working robots," says William L. "Red" Whittaker, director of CMU's Field Robotics Center.

A test model of one of those machines is included with other cleanup tools in a new display at the State Museum of Pennsylvania in Harrisburg, which is being unveiled Saturday to commemorate the anniversary.

Ralph DeSantis, a spokesman for Exelon Corp., the utility that operates Three Mile Island, says people are coming into the industry today who weren't born when the accident occurred. "They grew up watching Homer Simpson," the cartoon character who portrays a bumbling nuclear-plant worker, "but they know it's just a cartoon." Moreover, the industry is growing, offering jobs at a time of rising unemployment.

Printed in The Wall Street Journal, page A3